

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-22 and 24-36 are currently pending in the present application, Claims 5 and 11 having been amended and new Claims 35 and 36 having been added by the present amendment, Claims 12-22 and 24-34 having been withdrawn from further consideration as being drawn to non-elected Groups II-IV.

In the outstanding Office Action, Claims 5 and 11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Su et al. (U.S. Patent No. 6,608,920), and further in view of Chau et al. (U.S. Patent No. 5,859,698); and Claims 6-8 were objected to as being dependent upon a rejected base Claim 5. However, Claims 1-4 and 9-10 were allowed and Claims 6-8 were indicated as being allowable if rewritten in independent form.

Amended Claims 5 and 11 and new Claims 35 and 36 are fully supported by the specification, drawings and claims as originally filed. Applicant therefore submits that no new matter has been introduced.

New Claims 35 and 36 are directed to a method and a unit for pattern matching utilizing template matching, and thus, Claims 35 and 36 are in the elected Group I.

The basic requirements for establishing a *prima facie* case of obviousness as set forth in MPEP 2143 include (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the reference (or references when combined) must teach or suggest all of the claim limitations. Applicant submits that a *prima facie* case of obviousness has not been established in the present case because the cited references, either taken

singularly or in combination, do not teach or suggest all of the limitations recited in independent Claims 5 and 11.

Independent Claim 5 of the present application recites a pattern matching method of performing template matching between a waveform template, as a registered template, generated based on a plurality of measured signal waveforms and a subsequently measured signal waveform. In a first step, template matching between the registered template and a newly measured waveform is performed. In a second step, a new waveform template is generated based on a plurality of waveforms including the signal waveform used for generating the registered template and the newly measured signal waveform, and the registered template is replaced with the new template. The first step and the second step are repeated sequentially. Namely, in the present invention recited in Claim 5, a template is updated (or replaced) selectively using any signal waveforms including not only a new signal waveform which has been most recently measured but also signal waveforms which were previously measured. Therefore, according to the invention recited in Claim 5, the more template matching is performed, the higher the template matching accuracy becomes.

Su et al. disclose that a registered template A is replaced with a registered template B, after performing template matching between the registered template A and a newly measured waveform B. Then, the registered template is replaced with a registered template C, after performing template matching between the registered template B and a newly measured waveform C. Namely, Su et al. disclose that template matching is performed using only a new signal waveform which is most recently measured. However, Su et al. fail to disclose that a template is updated (or replaced) selectively using any signal waveforms including not only a new signal waveform which has been most recently measured but also signal waveforms which were previously measured.

Chau et al. also disclose that template matching is performed using only a new signal waveform which is most recently measured. However, Chau et al. fail to disclose that a template is updated (or replaced) selectively using any signal waveforms including not only a new signal waveform which has been most recently measured but also signal waveforms which were previously measured.

Since neither Su et al. nor Chau et al. disclose a template is updated (or replaced) selectively using any signal waveforms including not only a new signal waveform which has been most recently measured but also signal waveforms which were previously measured, even if the teachings of these references are combined, the combined teachings of these references would not in any way obviate the invention recited in Claim 5. Therefore, Claim 5 is believed to be allowable.

Likewise, independent Claim 35 includes subject matter substantially similar to what is recited in Claim 5 to the extent discussed above. Thus, Claim 35 is also distinguishable from Su et al. and Chau et al. Therefore, Claim 35 is believed to be allowable.

Substantially the same arguments as set forth above with regard to Claim 5 also apply to dependent Claims 6-8, which depend directly or indirectly from Claim 5. Accordingly, each of the dependent claims is also believed to be allowable.

Claim 11 of the present application recites a pattern matching unit that performs template matching. The pattern matching unit includes a template generator which generates a waveform template based on a plurality of measured signal waveforms and registers the generated template as a registered template; and a matching judgment unit which is electrically connected to the template generator and which performs template matching between a newly measured signal waveform and the registered template. The template generator generates a new waveform template based on the plurality of signal waveforms used for generating the registered template and the newly measured signal waveform and

replaces the registered template with the new template. Namely, in the present invention recited in Claim 11, a template is updated (or replaced) selectively using any signal waveforms including not only a new signal waveform which has been most recently measured but also signal waveforms which were previously measured. Therefore, according to the invention recited in Claim 11, the more template matching is performed, the higher the template matching accuracy becomes.

Neither Su et al. nor Chau et al. disclose that a template is updated (or replaced) selectively using any signal waveforms including not only a new signal waveform which has been most recently measured but also signal waveforms which were previously measured. Accordingly, even if the teachings of these references are combined, the combined teachings of these references would not in any way obviate the invention recited in Claim 11. Therefore, Claim 11 is believed to be allowable.

Likewise, independent Claim 36 includes subject matter substantially similar to what is recited in Claim 11 to the extent discussed above. Thus, Claim 36 is also distinguishable from Su et al. and Chau et al. Therefore, Claim 36 is believed to be allowable.

Consequently, in view of the present amendment, and in view of the indication of allowable subject matter, it is respectfully submitted that this application is in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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